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Two Federal projects will team-up to combine attacks on pollution

To assure greater progress in abating stream pollution from dilute pulp and paper mill effluents which are extremely difficult to treat by processes presently available, the top technical men in charge of two separate Federally-aided research projects now getting underway at Green Bay and Appleton, Wis., have agreed to share new technical knowledge that they produce. Meeting at Appleton after an inspection tour of the Pulp Manufacturers Research League's reverse osmosis project in its pilot run at the Appleton mill of Consolidated Papers, Inc., N. L. Malcove, secretary of the Green Bay Metropolitan Sewerage District, and Averill J. Wiley, technical director of the League, issued a joint statement of their intention to work together to make both projects more resultful.

"The Green Bay Metropolitan research assignment is to reduce the oxygen-consuming effect (B.O.D.) of pulp and paper mill effluents in the streams through developing biological treatment processes of the general type now used in treating sanitary wastes," they explained. "Such a process goes to work treating the effluent after it has been discharged to the mill sewer but before it reaches the river. Biological oxidation processes are highly efficient and economical as methods of reducing the B.O.D. of dilute wastes.

"The Research League is working with reverse osmosis, a totally different process. It uses a membrane to remove dissolved substances from the watery effluent at a point inside the mill, close to where the waste was created. League scientists are aiming to remove a minimum of 75 per cent of the dissolved solids for separate treatment before the effluent reaches the sewer. With the dissolved solids thus removed by reverse osmosis, the remaining effluent is more dilute, and can be more efficiently and economically treated in the subsequent biological process.

"If the League research on reverse osmosis at Appleton is as successful as seems probable, it could reduce the installation and operating costs of the process that we are designing at Green Bay," Malcove declared. "Also, it should enable our process to cut the stream loading further than if we were working with untreated effluents.

"When the Metropolitan District develops its biological process to the level indicated by results to date, a mill which teams that process with our process should be able to cut its B.O.D. discharge considerably below that what would be possible by the use of either process alone," Wiley added. "We recognize that a mill using both processes to treat its weak effluents can not only do a better job of stream clean-up but also can do it more economically."

The Green Bay demonstration project is budgeted for total outlay of $335,000, of which 75 per cent is covered by a grant from the Federal Water Pollution Control Administration. The Appleton project totals $690,000, with 70 per cent coming from FWPCA.